

FLUOROPHORE COMPOUNDS AND THEIR USE IN BIOLOGICAL SYSTEMS

Abstract

Fluorophore compounds and methods for their use are disclosed.

The fluorophores contain a

2-dicyanomethylen-3-cyano-2,5-dihydrofuran (DCDHF) moiety

and one or more donor groups conjugated to the

2-dicyanomethylen-3-cyano-2,5-dihydrofuran group. The donor groups can contain atoms with free electron pairs such as oxygen, sulfur, nitrogen, or phosphorous. The fluorophore compounds can be used to label and detect biological molecules and biological structures either *in vivo* or *in vitro*.